"Express M ail" mailing label number EL967856681US
Date of Deposit May 19, 2004
I hereby certify that this paper or fee is being deposited with the United States Postal Service "Express Mail Post Office to Addressee" services under 37 C.F.R. 1.10 on the date indicated above and is addressed to the Commissioner For Patents, Alexandria, VA 22313-1450.
Typed Name of Person Mailing Paper or Fee: Tanra F. Paulin
Signature:

PATENT APPLICATION
DOCKET NO. GENF101.02

INSURANCE PACKAGING AND RATING METHODOLOGY

INVENTORS:

Daniel W. Crandall
Barbara A. Anderson
Charles S. Winston
Jeff Brown
Brian Emmen

INSURANCE PACKAGING AND RATING METHODOLOGY

CROSS REFERENCE TO RELATED APPLICATIONS

This application is a continuation of application serial no. 10/824,721 filed April 15, 2004, which is a continuation-in-part of application serial number 09/599,037 filed June 21, 2000 and claiming priority of provisional application serial number 60/139,859 filed June 21, 1999. This application also claims the priority of provisional application serial number 60/507,158 filed September 29, 2003.

BACKGROUND

[0001] The nature of property and casualty insurance is rapidly evolving. This is especially true following the terrorist attacks of September 11, 2001. On a geographic basis, the insurance industry has recently begun to track, compile, and monitor various risks according to zip code or some larger scale. As an example, a geographic area for a given zip code may contain a number of different flood zones. Identifying a location as being within that zip code does not, by itself, mean the location lies within or outside a flood zone.

[0002] Before an insurance policy can be issued, a manual examination by an underwriter is often required to determine if a given location falls within a particular risk zone. Not only is this manual examination time consuming, its accuracy can be suspect.

[0003] Another challenge facing the insurance industry has been to balance risk and claims paid against the premium rates to ensure profitability. One of the greatest uncertainties has been the unanticipated insured risk, only determined to be covered later, usually after litigation. These result in long lists of terms, conditions and exclusions to coverage. Market needs and desires often result in exceptions to the exclusions, which also may have exclusions, and so on. Additionally, for desired insurance coverage which falls outside of the scope of a normal policy, endorsements or riders are provided that also may include exclusions, exceptions and so on.

[0004] The complexity of the resulting legal contracts, i.e. insurance policies, has spawned large bureaucratic government agencies to regulate the insurance industry, policies, and practices, requiring all insurance companies to have each insurance policy's form, rates, rules and underwriting guides approved. Each state has an insurance department or regulatory board that oversees insurance within that particular state. As such, each state's rules vary from other states. Consequently, a multi-state insurance provider must comply with the regulatory provisions of each state in which insurance policies are issued.

[0005] Entire sub-industries have emerged to provide compliance assistance with state filings as well as computer systems to manage policy generation, premiums, claims, claims adjusting, endorsements and data collection for actuarial analysis. One of the larger companies in the insurance provider's service industry *is* the Insurance Service Organization (ISO). ISO provides standard policy forms, rates, loss costs, rules and underwriting which have already been generically approved by every state insurance regulating agency. Each individual type of coverage is its own standalone policy having the insurance agreement, exclusions, exceptions, terms and conditions. The ISO business model is the standard for most multi-state insurance providers and has become the standard in the industry. This system is designed to be modular, hence each component being able to stand by itself. However, inherent in this type of system are exceptions to exclusions where the exclusion and exceptions appear at more than one location in the policy, thereby rendering the policy all but unreadable. Attempts to clarify the policy result in additional complexity as more contradictory language is introduced.

[0006] Additionally, this complexity is exacerbated by insurance marketing attempts to package multiple coverages into a single binder. A traditional package policy, for example, may include having four separate types of coverage A, B, C and D. For example, coverage A might represent real property insurance, while coverage B represents personal property, i.e. possessions and contents, insurance for accidental damage, coverage C

represents insurance for losses due to criminal activities; and coverage D represents general liability insurance for accidental acts of the insured against a third party. Each of these coverages is a standalone policy complete with an insurance agreement, exclusion, exceptions, terms and conditions. A cover page is attached to the front of the stack of policies, a boilerplate list of common legal provisions is attached to the back of the stack and the entire assembly is bound together. Unfortunately, a multitude of the exclusions and exceptions to the individual policies are redundant, or so close as to appear redundant. This, in combination with the inherent format, renders the binder a complex incomprehensible mess.

[0007] Additionally, package policies have not included umbrella liability policies, directors and officers liability insurance, personal auto insurance, homeowner's ins urance, professional errors and omissions insurance, medical malpractice, or a whole multitude of more specialized insurance coverages.

[0008] The combination of the exclusion approach to limiting insurer's risk and the ISO business model has resulted in an industry which has garnered more than a few detractors and fueled much litigation. Oftentimes, tens of thousands of dollars are spent simply determining if coverage exists under the policy, let alone the amount of the coverage. For example, the industry spent hundreds of millions of dollars determining liability on such issues as total pollution exclusions and coverage triggers caused by year 2000 issues. Additionally, the duty to defend an insured sometimes has extended beyond the dollar limits of the policy itself. This represents an unpredictable and unquantifiable risk to the insurer and consequently, results in higher premiums to the consumer. The unlimited defense coverage oftentimes leads to substantial settlements notwithstanding solid policy language to the contrary, simply because of the economic coercion.

[0009] What is needed is an ability to more accurately and efficiently compare a location to one or more risk zones to determine an appropriate insurance rating for that location. Also needed is a simplified insurance

model, method or paradigm that eliminates confusion, reduces ambiguity, and reduces uncertainty for insurers, insureds and third party claimants.

DESCRIPTION OF THE DRAWINGS

[0010] Fig. 1 is a schematic illustration of an exemplary computer network capable of use in implementing various embodiments of the present invention.

[0011] Fig. 2 is a block diagram illustrating various logical elements of the components of Fig. 1 according to an embodiment of the present invention.

[0012] Fig. 3 illustrates the structure of a geographic risk table according to an embodiment of the present invention.

[0013] Fig. 4 illustrates risk zone boundaries layered over a map according to an embodiment of the present invention.

[0014] Fig. 5 illustrates the structure of a customer table according to an embodiment of the present invention.

[0015] Fig. 6 illustrates the structure of a location table according to an embodiment of the present invention.

[0016] Fig. 7 illustrates the structure of a GIS (Geographic Information System) table according to an embodiment of the present invention.

[0017] Fig. 8 illustrates the map of Fig. 4 over which location boundaries are layered according to an embodiment of the present invention.

[0018] Fig. 9 illustrates the map of Fig. 4 over which location boundaries and risk zone boundaries are layered according to an embodiment of the present invention.

[0019] Fig. 10 illustrates the structure of a ratings table according to an embodiment of the present invention.

[0020] Fig. 11 illustrates the logical components of a GIS rating application according to an embodiment of the present invention.

[0021] Fig. 12 is an exemplary flow diagram illustrating steps taken to practice an embodiment of the present invention.

[0022] Fig. 13 is a schematic description of a comprehensive insurance policy according to an embodiment of the invention.

[0023] Fig. 14 is an exemplary flow diagram including method steps for packaging a comprehensive insurance policy according to an embodiment of the present invention.

DETAILED DESCRIPTION

[0024] *INTRODUCTION:* It is expected that various embodiments of the present invention will allow insurance underwriters to efficiently and accurately determine if a particular location falls within one or more risk zones and to ascertain an appropriate insurance rating based on the determination.

[0025] Embodiments of the present invention also provide a new business model for the insurance industry that eliminates the inherent ambiguity of the existing model by replacing exclusions to coverage with dollar limits, with the exception of uninsured property and liability exposures as explained below. Under the new model, any number of coverages can be provided, but only to the limits stated within a straight forward, easy to understand insurance policy. Also included is a universal defense provision that clearly states that the insurance company will only pay defense costs up to the policies stated policy sub-limits and any aggregate limits. No unlimited "duty to d efend" is provided, which is materially different than the standard ISO model.

[0026] Reduced dramatically is the need for litigation to determine coverage. Here, either the coverage exists or it doesn't. Also eliminated, or at least greatly reduced, are the uncertainties of the insurer, the insured and the potential third party claimant as to what is covered, as well as whether or not the insurance company has a duty to defend.

[0027] Here, uninsured property and liability exposures are defined as exclusions of insurance coverage for illegal activities or things, as well as for activities or things that directly induce or contribute to illegal activities. Also included are exclusions for damage resulting from intentional acts of the insured, acts of war and other typical force majeure type provisions, as well as dynamic and emerging risks such as nuclear, biological and chemical terrorism.

[0028] *NETWORK ENVIRONMENT:* Fig. 1 schematically illustrates exemplary network environment 10 for use in implementing various embodiments of the present invention. Network 10 includes risk zone database 12, location database 14, server 18, and client 16. Risk zone database 12 represents generally any collection of geographic data that identifies any number of risk zones of varying types. A risk zone is a geographic area in which it has been determined that a particular risk is more or less likely than in a neighboring geographic area. For example, in a geographic area defining an interstate highway, vehicle accidents are more likely to occur than in a geographic area immediately adjacent to the interstate. Floods are more likely to occur in geographic areas adjacent to waterways. Forest fires are more likely to occur in geographic areas that border national forests. Data identifying a particular geographic risk zone might define a particular area or a boundary of that area.

[0029] Location database 14 represents generally any collection of data identifying a location. Data identifying a particular location might define a geographic point – a specific latitude and longitude for example. The data might instead define a particular area or a boundary of that area. While risk zone database 12 and location database 14 are shown as separate components of network 10, they may in fact be replaced with a single database or three or more databases.

[0030] Server 18 represents generally any computing device capable of executing one or more programs for accessing and using data contained in databases 12 and 14. Client 16 represents generally any computing device capable of executing one or more programs for interacting with server 18.

[0031] Link 20 represents generally a cable, wireless, or remote connection via a telecommunication link, an infrared link, a radio frequency link, or any other connector or system of connectors that provides electronic communication between client 16, server 18, and databases 12 and 14. Link 20 may include an intranet, the Internet, or a combination of both. Each portion of link 20 connecting a given component 12, 14, or 16 to server 18 may or may not be distinct from the remaining portions of link 20. For

example databases 12 and 14 may be connected to computer 16 via a parallel connection. Where databases 12 and 14 are stored on a hard drive integrated into server 18, link 20 or a portion of link 20 may be embedded in server 18.

[0032] ***COMPONENTS:*** Fig. 2 is an exemplary block diagram showing the logical components of databases 12 and 14, server 18, and client 16. Risk zone database 12 includes one or more geographic risk tables 22. Each geographic risk table defines each geographic risk zone pertaining to a particular risk that can affect an insurance rating. As examples, the risk pertaining to a given risk zone can be any potential physical or economic hazard such as a proximity to a highway, a national forest, a nuclear power plant, a volcano, or a flood zone. An example of a geographic risk table is described below with reference to Fig. 3.

[0033] Location database 14 includes customer table 24, location table 26, GIS (Geographic Information System) table 28, and ratings table 30. Customer table 24 represents generally a collection of data identifying one or more customers. Location table 26 represents generally a collection of data corresponding to one or more locations – with each location being associated with a customer identified in customer table 24. GIS table represents generally a collection of data identifying coordinates. Various groupings of those coordinates can identify a location. Each such grouping is associated with data corresponding to that location in location table 26. By identifying a customer in customer table 24, one or more locations associated with that customer can be identified in location table 26. Coordinates defining a given location can then be obtained from GIS table 28. Examples of tables 24-28 are described below with reference to Figs. 5-7.

[0034] Ratings table 30 represents generally any collection of data that can be used when calculating an insurance rating relating in some fashion to the proximity of a given location to one or more geographic risk zones. An example of a ratings table is described below with reference to Fig. 10.

[0035] Fig. 3 illustrates an exemplary structure of geographic risk table 22. Table 22 includes a plurality of entries 38. Each entry 38 contains data

in four fields 40-46. These fields are labeled zone ID 40, risk type 42, risk score 44, and zone boundary 46. Each entry 38 is associated with and identifies a particular risk zone. Data in field 40 identifies the particular entry 38. Data in field 42 of a given entry 38 identifies a particular type of risk corresponding to the risk zone identified by that entry 38.

[0036] Data in field 44 of an entry 38 identifies a risk score for the risk zone identified by that entry 38. A risk score is data corresponding to the severity of a risk type for a particular risk zone. As an example, for a given risk zone a score may in some manner indicate that the particular risk is somewhat likely, likely, or very likely. As will be described below, the score for a risk zone is used in determining an insurance rating when it is determined that a given location falls within that risk zone.

[0037] Data in field 46 of an entry 38 defines a geographic boundary for the risk zone identified with that entry 38. A geographic boundary can be defined in at least two ways. A boundary can be identified as a polygon defined by the coordinates of the end points of each line segment of the polygon. A boundary can also be a circumference defined by the coordinates of a center point and a radius. Examples of these are described below with reference to Fig. 4.

[0038] Fig. 4 illustrates a map 48. Layered over map 48 are risk zones 50-58. Risk zone 50 has a boundary 60 in the form of a polygon defined by coordinates 60A-60I. Risk zones 52-58 each have a boundary in the form of a circumference defined by coordinates 62 and a given radius.

[0039] Fig. 5. illustrates an exemplary structure of customer table 24 from Fig. 2. Customer table 24 includes entries 64. Each entry is associated with a particular customer and includes data in customer ID field 66 and data in profile field 68. Data in customer ID field 66 of an entry 64 uniquely identifies that entry 64. Data in profile field 68 of an entry 64 in some manner identifies or is otherwise related to a customer. For example data in profile field 68 may include a name and an address.

[0040] Fig. 6. illustrates an exemplary structure of location table 26 from Fig. 2. Location table 26 includes entries 70. Each entry is associated with

a particular location and includes data in location ID field 72, address field 74, and customer ID field 76. Data in location ID field 72 of an entry 70 uniquely identifies that entry 70. Data in address field 74 of an entry 70 includes an address of the location associated with that entry 70. Data in customer ID field 76 of an entry 70 identifies an entry 64 in customer table 24 of Fig. 5 and, thus, associates a location with a particular customer. It is noted that two or more entries 70 and corresponding locations in location table 26 may be associated with a single customer.

[0041] Fig. 7 illustrates an exemplary structure of GIS table 28 from Fig. 2. GIS table 28 includes entries 78. Each entry 78 includes data in GIS ID field 80, coordinates field 82, and location ID field 84. Data in GIS ID field of an entry 78 uniquely identifies that entry 78. Data in coordinates field 82 of an entry 78 identify a geographic point. For example, the data might identify a specific latitude and longitude. Data in location ID field 84 of an entry 78 identifies an entry 70 in location table 26 of Fig. 6 and, thus, assigns a geographic point to a particular location. A given location might be defined by a single geographic point. In such a case, a single entry 78 in GIS table 28 identifying that point will be assigned to an entry 70 in location table 26. Another location might be defined by a polygon shaped geographic boundary. Such a boundary can be defined by line segments connecting three or more geographic points. In this case, three or more entries 78, each defining one of those geographic points, will be assigned to an entry 70 in location table 26.

[0042] Fig. 8 helps illustrate an example of how tables 24-28 of Figs. 5-7 can be used to define locations. Fig. 8 illustrates map 48 from Fig. 4. Shown layered over map 48 are locations 86-94. Locations 86 and 88 are each defined by a single geographic point represented by a star. Referring back to Fig. 6, location table 26 will include separate entries 70 for locations 86 and 88. Those entries 70 may be associated with the same customer or different customers in customer table 24 of Fig. 5. Referring to Figs. 6 and 7, GIS table 28 will include an entry 78 defining the geographic point for location 86. That entry 78 will have data in location ID field 84 identifying

the entry 70 in location table 26 for location 86. Similarly, GIS table 28 will include another entry 78 defining the geographic point for location 88. That entry 78 will have data in location ID field 84 identifying the entry 70 in location table 26 for location 88.

[0043] Still referring to Fig. 8, locations 90-94 are each defined by a geographic boundary in the shape of a polygon. Referring back to Fig. 6, location table 26 will include separate entries 70 for locations 90-94. Those entries 70 may be associated with the same customer or different customers in customer table 24 of Fig. 5. Location 90 is a rectangular area defined by a geographic boundary. That boundary is identified by four line segments connected at geographic points 96-102. Referring to Figs. 6 and 7, GIS table 28 will include another four entries 78 each associated with the entry 70 in location table 26 for location 90. Each of the four entries 78 will define a different geographic point 96, 98, 100, or 102.

[0044] Location 92 is also a rectangular area defined by a geographic boundary. That boundary is identified by four line segments connected at geographic points 104-110. Referring to Figs. 6 and 7, GIS table 28 will include another four entries 78 each associated with the entry 70 in location table 26 for location 92. Each of the four entries 78 will define a different geographic point 104, 106, 108, or 110.

[0045] Location 94 is an irregular area defined by a geographic boundary. That boundary is identified by seven line segments connected at geographic points 112-124. Referring to Figs. 6 and 7 GIS table 28 will include another seven entries 78 each associated with the entry 70 in location table 26 for location 94. Each of the seven entries 78 will define a different geographic point 112, 114, 116, 118, 120, 122, or 124.

[0046] Fig. 9 illustrates geographic risk zones 50-58 and locations 86-94 layered over map 48. A visual inspection reveals that locations 86 and 90 are not located within a geographic risk zone. Location 88 is located within risk zones 58, 60, and 62. A portion of location 92 is located within risk zone 62. A portion of location 94 is located within risk zone 50.

[0047] Fig. 10 illustrates an exemplary structure of ratings table 30 from Fig. 2. Ratings table 30 includes entries 126. Each entry 126 is associated with a particular type of risk that may be insured against and includes data in risk ID field 128, risk type field 130, and base rating field 132. Data in risk ID field 128 of an entry 126 uniquely identifies that entry 126. Data in risk type field 130 of an entry 126 identifies the particular risk associated with that entry 126. Data in base rating field 132 of an entry 126 identifies a base rating for the risk type associated with that entry 126.

[0048] Referring back to geographic risk table 22 shown in Fig. 3, data in risk type field 42 of entries 38 correspond to data in risk type field 130 of entries 126 of ratings table 30. A given entry 38 in geographic risk table 22 defines a given geographic risk zone for a risk type identified by risk type field 42 for that entry 38. A base rating for that risk type can be identified by locating an entry 126 in ratings table 30 associated with that same risk type.

[0049] Fig. 11 is an exemplary block diagram illustrating logical program elements of GIS rating application 34 from Fig. 2. As shown, GIS rating application 34 includes mapping module 134, risk rating module 136, and interface module 138. Mapping module 134 represents generally any program capable of comparing a location to a geographic risk zone to determine if the location falls within the geographic risk zone. In doing so, mapping module 134 can obtain data defining the location using location table 26 and GIS table 28 (Figs. 6 and 7). This data may itself define, or be of use in defining, a geographic point or a boundary of a location. The data, for example, may include the coordinates of the geographic point or the coordinates of the endpoints of line segments that define the location boundary. Data identifying the geographic risk zone can be obtained from geographic risk table 22 (Fig. 2). Again, this data may itself define, or be of use in defining, a boundary of a location. The data, for example, may include the coordinates of the endpoints of line segments that define the risk zone boundary.

[0050] To determine if a location is located within a geographic risk zone, mapping module 134 may determine if the location such as a geographic point falls entirely within the geographic boundary of the risk zone. Where the location is defined by a boundary, mapping module 134 compares that boundary to the boundary of the risk zone to determine if at least a portion of the geographic area bounded by the location boundary is also bounded by the boundary of the geographic risk zone. This can be accomplished, for example, by determining if the location boundary intersects or is contained entirely within the boundary of the geographic risk zone.

[0051] Risk rating module 136 represents generally any program capable of obtaining and using a score associated with a geographic risk zone to calculate an insurance rating related in some manner to a particular location. As an example, mapping module 134 may determine that a particular location falls within a given geographic risk zone. Referring to Fig. 3, accessing geographic risk table 22, ratings module 136 can obtain a score and data identifying the type of risk in question from an entry 38 associated with that geographic risk zone. Risk rating module 136 can then obtain a base rating for that risk type from ratings table 30 shown in Fig. 10 and then calculate an insurance rating using the obtained score and base rating.

[0052] For example, the base rating for a tornado risk may be a five. The particular value of the score may only be relevant when compared to base scores for other risk types. Continuing with the example, a score for a given tornado risk zone may be: (1) 0.5 indicating that the risk of tornado occurrence is somewhat likely over a given period; (2) 1.0 indicating that the risk of tornado occurrence is likely over that same period; or (3) 1.5 indicating that the risk of tornado occurrence is highly likely. The score can be multiplied with the base rating when calculating the insurance rating for a location for the given risk. It is noted that other variables may also be used to calculate a rating.

[0053] Still referring to Fig. 11, interface module 138 represents generally any program capable of generating and/or presenting an interface having user accessible controls for use in identifying a location. Such an interface may

include controls for entering or identifying an address or other coordinates associated with a location.

[0054] ***RATING METHODOLOGY:*** Fig. 12 is an exemplary flow diagram that helps illustrate steps taken to calculate an insurance rating. Initially, a location is identified (step 140). The location may be defined by a geographic point or boundary. A variable X is set to equal the number of risk zones and a variable Y is set to equal one (step 142). Referring back to Fig. 3, the number of risk zones may, for example, correspond to the number of entries 38 in geographic risk table 22.

[0055] The location identified in step 140 is compared to risk zone (Y) (step 144). Then it is determined if the location falls (at least partially) within risk zone (Y) (step 146). Steps 144 and 146, for example may be performed by mapping module 134 (Fig. 11). If the location lies outside of risk zone (Y), the process skips to step 150. Otherwise the risk type and score for risk zone (Y) are recorded (step 148). The variable Y is incremented by one (step 150), and it is determined if the value of Y exceeds the value of X (step 152). If it does not, the process repeats with step 144.

[0056] If the value of Y exceeds X then the process continues, and an insurance rating is calculated (step 154) based on each risk type and score recorded in step 148. Steps 148 and 154, for example, may be performed by risk rating module 136 (Fig. 11). For a given risk zone (Y), risk rating module 136 can obtain data identifying the risk type as well as a score for the risk zone and record those values in step 148. Using the recoded values, risk rating module 136 can obtain a base rating for each identified risk type and calculate an insurance rating using the base ratings and the recorded scores.

[0057] ***PACKAGING METHODOLOGY:*** Referring now to the Figs. 13 and 14, a new business model for the insurance industry will be described in detail. Referring first to Fig. 13, protection against a wide range of risks is packaged into a single comprehensive policy 156. Policy 156 includes a statement of coverage 158, specified dollar limits 160, and duty to defend provision 162.

Specified dollar limits 160 identify, for each risk covered, a dollar limit of coverage. Duty to defend provision 162 specifies that the duty to defend the policy holder for an action relating to a covered risk ends once the dollar limit of coverage for that risk has been met.

[0058] Referring now to Fig. 14, by replacing exclusions to coverage with specified dollar limits of coverage, the business model 164 (Fig. 14) eliminates the inherent ambiguity of the traditional model in which individual and distinct insurance policies are bundled. Under the new model 164, all risks can be covered under a statement of coverage 12 designed in step 166. A risk and probability of claim payments is determined in step 170. Step 170, for example, can include the geographic determination of an insurance rating described above with reference to Fig. 12. In step 172, specified dollar limits of coverage are determined for the covered risks including those risks that have traditionally been excluded from coverage. The dollar limit determination made in step 170 may be based at least in part on the risk and probability determination made in step 168 – for example – the greater the risk the lower the dollar limit of coverage. A premium necessary to ensure profitability is determined in step 174 based at least in part on the determinations made in steps 168 and 170. For example – as the risks and/or dollar limits of coverage increase so does the premium. Regulatory approval is obtained in step 174, the insurance product is marketed in step 176, and insured clients are services in step 178.

[0059] While there are shown and described certain embodiments of the invention, it is to be distinctly understood that this invention is not limited thereto but may be variously embodied to practice within the scope of the following claims.

[0060] ***CONCLUSION:*** The diagrams of Figs. 1-3, 5-7, 10, 11, and 13 show the architecture, functionality, and operation of various embodiments of the present invention. A number of the blocks are defined as programs. Each of those blocks may represent in whole or in part a module, segment, or portion of code that comprises one or more executable instructions to implement the

specified logical function(s). Each block may represent a circuit or a number of interconnected circuits to implement the specified logical function(s).

[0061] Also, the present invention can be embodied in any computer-readable media for use by or in connection with an instruction execution system such as a computer/processor based system or an ASIC (Application Specific Integrated Circuit) or other system that can fetch or obtain the logic from computer-readable media and execute the instructions contained therein. "Computer-readable media" can be any media that can contain, store, or maintain programs and data for use by or in connection with the instruction execution system. Computer readable media can comprise any one of many physical media such as, for example, electronic, magnetic, optical, electromagnetic, infrared, or semiconductor media. More specific examples of suitable computer-readable media include, but are not limited to, a portable magnetic computer diskette such as floppy diskettes or hard drives, a random access memory (RAM), a read-only memory (ROM), an erasable programmable read-only memory, or a portable compact disc.

[0062] Although the flow diagrams of Figs. 12 and 14 show specific orders of execution, the orders of execution may differ from that which is depicted. For example, the order of execution of two or more blocks may be scrambled relative to the order shown. Also, two or more blocks shown in succession may be executed concurrently or with partial concurrence. All such variations are within the scope of the present invention.

[0063] The present invention has been shown and described with reference to the foregoing exemplary embodiments. It is to be understood, however, that other forms, details, and embodiments may be made without departing from the spirit and scope of the invention that is defined in the following claims.